

### C. Remarks

The claims are 1-11 and 14-33, with claims 1 and 31 being independent. Claims 1 and 31 have been amended to clarify the present invention. Specifically, Applicants have amended these claims to specify that a ketone has from 4 to 13 carbon atoms. Support for this amendment may be found, inter alia, in the specification at page 17, line 27 - page 18, line 1. In particular, a ketone in the specification is defined as having a general formula  $R-C(O)-R_1$ , wherein R and  $R_1$  preferably have a total of 3 to 12 carbons. Thus, including the  $sp^2$  carbonyl carbon, the ketone has from 4 to 13 carbon atoms. No new matter has been added. Reconsideration of the present claims is expressly requested.

Applicant have amended the independent claims to prevent any overlap with FR 2 498 622, which was cited in a May 27, 2004 Office Action in a corresponding European Application. FR 2 498 622 teaches a diesel fuel, which can be combined with alcohols using fatty ester acids. In some instances, a nitrate cetane number improving agent can be added to the diesel fuel to further raise its cetane number. In other instances, the alcohol mixture can contain acetone.

Applicants have specifically excluded acetone from the presently claimed fuel composition. Thus, clearly, even if assumed, arguendo, that FR 2 498 622 teaches a fuel composition containing a fatty acid ester, acetone, an alcohol and a nitrate cetane number improving agent, this composition cannot anticipate the presently claimed invention.<sup>1</sup>

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<sup>1/</sup> As Applicants have already indicated in the Information Disclosure Statement filed on June 18, 2004, acetone and cetane improving agents in FR 2 498 622 are merely optional ingredients. There is no teaching that a fuel should or must contain an alcohol, acetone, a fatty acid ester and a nitrate to achieve a useful fuel composition.

Using an alcohol with acetone and a nitrate cetane number improving agent increases the cost of the composition. The costs are especially prohibitive in connection with nitrate cetane number improving agents. In addition to being very expensive, nitrate cetane number improving agents are well-known to be highly volatile and semi-explosive,  
(continued...)

Applicants respectfully submit that it would not have been obvious to modify FR 2 498 622 by replacing acetone with a presently claimed ketone. FR 2 498 622 teaches using fatty acid esters to achieve a better compatibility between an alcohol and diesel fuel. This document, however, does not disclose or suggest that adding any other compounds, such as acetone or a nitrate, results in an improvement in compatibility. The addition of acetone is not disclosed to provide any benefit or advantage whatsoever. In fact, FR 2 498 622 teaches that the esters alone are sufficient to achieve the desired compatibility.

Applicants submit that acetone appears to be a by-product from the production of the desired alcohol component, which by-product is merely tolerated by the fuel composition, without giving rise to any beneficial effects. Accordingly, there is clearly no motivation for skilled artisan to modify a by-product in a fuel composition in FR 2 498 622 by including in its stead a more expensive compound, which is not taught or suggested to provide any benefits.

In the presently claimed invention, Applicants have found that an oxygen-containing component comprising at least two different compounds containing at least four different oxygen-containing functional groups is needed to achieve proper compatibility between diesel fuel and oxygen-containing compounds to produce a motor fuel composition, which is homogeneous, water-tolerant, burns evenly throughout the mixture,

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which makes them difficult and undesirable to handle. Amyl nitrate mentioned in FR 2 498 622, for example, is known to be extremely dangerous to human health. Because it has often been abused with fatal results, amyl nitrate is a restricted compound. Importantly, amyl nitrate produces an undesirable smell upon combustion in a diesel engine.


Clearly, based on these well-known facts a person skilled in the art would not be motivated to add nitrate cetane number improving agents to fuel unless absolutely necessary. As discussed above, according to FR 2 498 622, cetane number improving agents are not necessary, because FR 2 498 622 teaches that fuel with appropriate cetane numbers can be achieved by using only an alcohol component and an ester.

reduces harmful pollutants and can be produced from renewable resources. FR 2 498 622 fails to disclose either these or any other reasons for the need to use the presently claimed oxygen-containing compounds with the claimed number of different oxygen-containing functional groups.

Wherefore, Applicants respectfully submit that the presently claimed invention is clearly patentable over the art of record. Favorable consideration of the claims and expedient passage to issue of the present case are respectfully requested.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

  
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